Available online at www.sciencedirect.com
ScienceDirect
Aquaculture
ELSEVIER
Aquaculture 269 (2007) 544–546
www.elsevier.com/locate/aqua-online

Contents of *Aquaculture*, Volume 269

VOL. 269 NOS. 1–4 **14 September 2007**

Review Article

The husbandry of zebrafish (*Danio rerio*): A review
C. Lawrence (Boston, Massachusetts, U.S.A.) 1

Diseases

Characteristics of adherence of pathogenic *Vibrio alginolyticus* to the intestinal mucus of large yellow croaker (*Pseudosciaena crocea*)
Q. Yan (Xiamen, PR China), Q. Chen (Xiamen, Qingdao, PR China), S. Ma (Qingdao, PR China), Z. Zhuang and X. Wang (Xiamen, PR China) 21

Effects of three dosages of oral oxolinic acid treatment on the selection of antibiotic-resistant *Aeromonas*: Experimental approach in farmed trout
M. Naviner, E. Giraud, C. Thorin, H. Le Bris, H. Pouliquen and J.-P. Ganiere (Nantes, France) 31

cDNA cloning, mRNA expression and recombinant expression of a cathepsin L-like cysteine protease from *Neobenedenia melleni* (Monogenea: Capsalidae)
Y.-z. Rao and T.-b. Yang (Guangzhou, PR China) 41

White spot syndrome virus (WSSV) inactivation in *Penaeus japonicus* using purified monoclonal antibody targeting viral envelope protein
K.D.T. Natividad, M. Hagio, M. Tanaka, N. Nomura and M. Matsumura (Tsukuba, Japan) 54

First record of a *Marteilia* parasite (Paramyxea) in zooplankton populations from a natural estuarine environment
N. Carrasco (Tarragona, CRAq, Spain), I. López-Flores (La Tremblade, France), M. Alcaraz (Catalonia, Spain), M.D. Furones (Tarragona, CRAq, Spain), F.C.J. Berthe (Charlottetown, Canada) and I. Arzul (La Tremblade, France) 63

Roseovarius crassostreae, the etiological agent of Juvenile Oyster Disease (now to be known as *Roseovarius* Oyster Disease) in *Crassostrea virginica*
A.P. Maloy (Orono, ME, United States), S.E. Ford (Port Norris, NJ, United States), R.C. Karney (Oak Bluffs, MA, United States) and K.J. Boettcher (Orono, ME, United States) 71

Efficacy of oral immunization with *Edwardsiella tarda* ghosts against edwardsiellosis in olive flounder (*Paralichthys olivaceus*)
S.R. Kwon, E.H. Lee, Y.K. Nam, S.K. Kim and K.H. Kim (Pusan, South Korea) 84

Bioavailability and absorption analysis of oxytetracycline orally administered to the standardized moulting farmed Pacific white shrimps (*Penaeus vannamei*)
D. Faroongsarng, A. Chandumpai, S. Chiayvareesajja and Y. Theapparat (Hat Yai, Thailand) 89

Vibrionaceae dominates the microflora antagonistic towards *Listonella anguillarum* in the intestine of cultured Atlantic cod (*Gadus morhua* L.) larvae
A.J. Fjellheim, K.J. Playfoot, J. Skjermo and O. Vadstein (Trondheim, Norway) 98

Impact of daily fluctuations of optimum (27 °C) and high water temperature (33 °C) on *Penaeus vannamei* juveniles infected with white spot syndrome virus (WSSV)
M.M. Rahman (Gent, Merelbeke, Belgium), M. Corteel, J.J. Dantas-Lima (Merelbeke, Belgium), M. Wille (Gent, Belgium), V. Alday-Sanz (Nivelles, Belgium), M.B. Pensaert (Merelbeke, Belgium), P. Sorgeloos (Gent, Belgium) and H.J. Nauwynck (Merelbeke, Belgium) 107

Evaluation and development of diagnostic methods for *Renibacterium salmoninarum* causing bacterial kidney disease (BKD) in the UK
D. Bruno, B. Collet, A. Turnbull, R. Kilburn, A. Walker, D. Pendrey, A. McIntosh, K. Urquhart (Aberdeen, Scotland, United Kingdom) and G. Taylor (Weymouth, England, United Kingdom) 114

Feeding response of female American lobsters, *Homarus americanus*, to SLICE®-medicated salmon feed
S.L. Waddy, S.M. Mercer, M.N. Hamilton-Gibson, D.E. Aiken and L.E. Burridge (St. Andrews, NB, Canada) 123

Available online at www.sciencedirect.com
ScienceDirect
Aquaculture
ELSEVIER
Aquaculture 269 (2007) 544–546
www.elsevier.com/locate/aqua-online

Contents of *Aquaculture*, Volume 269

VOL. 269 NOS. 1–4 **14 September 2007**

Review Article

The husbandry of zebrafish (*Danio rerio*): A review
C. Lawrence (Boston, Massachusetts, U.S.A.) 1

Diseases

Characteristics of adherence of pathogenic *Vibrio alginolyticus* to the intestinal mucus of large yellow croaker (*Pseudosciaena crocea*)
Q. Yan (Xiamen, PR China), Q. Chen (Xiamen, Qingdao, PR China), S. Ma (Qingdao, PR China), Z. Zhuang and X. Wang (Xiamen, PR China) 21

Effects of three dosages of oral oxolinic acid treatment on the selection of antibiotic-resistant *Aeromonas*: Experimental approach in farmed trout
M. Naviner, E. Giraud, C. Thorin, H. Le Bris, H. Pouliquen and J.-P. Ganiere (Nantes, France) 31

cDNA cloning, mRNA expression and recombinant expression of a cathepsin L-like cysteine protease from *Neobenedenia melleni* (Monogenea: Capsalidae)
Y.-z. Rao and T.-b. Yang (Guangzhou, PR China) 41

White spot syndrome virus (WSSV) inactivation in *Penaeus japonicus* using purified monoclonal antibody targeting viral envelope protein
K.D.T. Natividad, M. Hagio, M. Tanaka, N. Nomura and M. Matsumura (Tsukuba, Japan) 54

First record of a *Marteilia* parasite (Paramyxea) in zooplankton populations from a natural estuarine environment
N. Carrasco (Tarragona, CRAq, Spain), I. López-Flores (La Tremblade, France), M. Alcaraz (Catalonia, Spain), M.D. Furones (Tarragona, CRAq, Spain), F.C.J. Berthe (Charlottetown, Canada) and I. Arzul (La Tremblade, France) 63

Roseovarius crassostreae, the etiological agent of Juvenile Oyster Disease (now to be known as *Roseovarius* Oyster Disease) in *Crassostrea virginica*
A.P. Maloy (Orono, ME, United States), S.E. Ford (Port Norris, NJ, United States), R.C. Karney (Oak Bluffs, MA, United States) and K.J. Boettcher (Orono, ME, United States) 71

Efficacy of oral immunization with *Edwardsiella tarda* ghosts against edwardsiellosis in olive flounder (*Paralichthys olivaceus*)
S.R. Kwon, E.H. Lee, Y.K. Nam, S.K. Kim and K.H. Kim (Pusan, South Korea) 84

Bioavailability and absorption analysis of oxytetracycline orally administered to the standardized moulting farmed Pacific white shrimps (*Penaeus vannamei*)
D. Faroongsarng, A. Chandumpai, S. Chiayvareesajja and Y. Theapparat (Hat Yai, Thailand) 89

Vibrionaceae dominates the microflora antagonistic towards *Listonella anguillarum* in the intestine of cultured Atlantic cod (*Gadus morhua* L.) larvae
A.J. Fjellheim, K.J. Playfoot, J. Skjermo and O. Vadstein (Trondheim, Norway) 98

Impact of daily fluctuations of optimum (27 °C) and high water temperature (33 °C) on *Penaeus vannamei* juveniles infected with white spot syndrome virus (WSSV)
M.M. Rahman (Gent, Merelbeke, Belgium), M. Corteel, J.J. Dantas-Lima (Merelbeke, Belgium), M. Wille (Gent, Belgium), V. Alday-Sanz (Nivelles, Belgium), M.B. Pensaert (Merelbeke, Belgium), P. Sorgeloos (Gent, Belgium) and H.J. Nauwynck (Merelbeke, Belgium) 107

Evaluation and development of diagnostic methods for *Renibacterium salmoninarum* causing bacterial kidney disease (BKD) in the UK
D. Bruno, B. Collet, A. Turnbull, R. Kilburn, A. Walker, D. Pendrey, A. McIntosh, K. Urquhart (Aberdeen, Scotland, United Kingdom) and G. Taylor (Weymouth, England, United Kingdom) 114

Feeding response of female American lobsters, *Homarus americanus*, to SLICE®-medicated salmon feed
S.L. Waddy, S.M. Mercer, M.N. Hamilton-Gibson, D.E. Aiken and L.E. Burridge (St. Andrews, NB, Canada) 123

Genetics

On the risk of criminal manipulation in caviar trade by intended contamination of caviar with PCR products
S. Wuertz (Berlin, Germany), M. Belay (Fulda, Germany) and F. Kirschbaum (Berlin, Germany) . . . 130
Evaluating genetic differentiation in wild populations of the Indian major carp, *Cirrhinus mrigala* (Hamilton–Buchanan, 1882): Evidence from allozyme and microsatellite markers
T. Chauhan, K.K. Lal, V. Mohindra, R.K. Singh, P. Punia, A. Gopalakrishnan (Lucknow, India), P.C. Sharma (New Delhi, India) and W.S. Lakra (Lucknow, India) . . . 135
Androgenesis, gynogenesis and the production of clones in fishes: A review
H. Komen (Wageningen, The Netherlands) and G.H. Thorgaard (Pullman, WA, USA) . . . 150
Genetic diversity of common carp (*Cyprinus carpio* L.) in Vietnam using four microsatellite loci
B.T. Thai (Darwin Northern Territory, Australia; Bac Ninh, Viet Nam), C.P. Burridge (Dunedin, New Zealand) and C.M. Austin (Darwin Northern Territory, Australia) . . . 174
Investment appraisal of genetic improvement programs in Nile tilapia (*Oreochromis niloticus*)
R.W. Ponzoni, N.H. Nguyen and H.L. Khaw (Penang, Malaysia) . . . 187
Use of microsatellites and a combinatorial optimization approach in the acquisition of gilthead seabream (*Sparus aurata* L.) broodstocks for hatcheries
Y.J. Borrell, C.E. Carleos (Oviedo, Spain), J.F. Asturiano (Spain), D. Bernardo, E. Vázquez, N. Corral, J.A. Sánchez and G. Blanco (Oviedo, Spain) . . . 200
Genetic variation in Chinese hatchery populations of the Japanese scallop (*Patinopecten yessoensis*) inferred from microsatellite data
Q. Li, K. Xu and R. Yu (Qingdao, China) . . . 211
Response of a lean muscle and a fat muscle rainbow trout (*Oncorhynchus mykiss*) line on growth, nutrient utilization, body composition and carcass traits when fed two different diets
E. Quillet, S. Le Guillou (Jouy en Josas Cedex, France), J. Aubin, L. Labbé (Sizun, France), B. Fauconneau and F. Médale (St Pée-sur-Nivelle, France) . . . 220

Husbandry and Management

Technical evaluation of tilapia (*Oreochromis niloticus*) monoculture and tilapia–prawn (*Macrobrachium rosenbergii*) polyculture in earthen ponds with or without substrates for periphyton development
M.S. Uddin, A. Farzana, M.K. Fatema (Mymensingh, Bangladesh), M.E. Azim (Scotland, United Kingdom), M.A. Wahab (Mymensingh, Bangladesh) and M.C.J. Verdegem (Wageningen, The Netherlands) . . . 232
Impacts of elevated water carbon dioxide partial pressure at two temperatures on Atlantic salmon (*Salmo salar* L.) parr growth and haematology
S. Fivelstad, R. Waagbø, S. Stefansson and A.B. Olsen (Bergen, Norway) . . . 241
Comparison of methods for anaesthetizing Senegal sole (*Solea senegalensis*) before slaughter: Stress responses and final product quality
L. Ribas (Bellaterra, Spain), R. Flos, L. Reig (Barcelona, Spain), S. MacKenzie (Bellaterra, Spain), B.A. Barton (Calgary, Alberta, Canada) and L. Tort (Bellaterra, Spain) . . . 250
Effect of probiotics on growth performance and digestive enzyme activity of the shrimp *Penaeus vannamei*
Y.-B. Wang (Hangzhou, China) . . . 259
Ingestion rate of postlarvae *Penaeus monodon* fed *Apocyclops dengizicus* and *Artemia*
O. Farhadian (Isfahan, Iran), F.Md. Yusoff and A. Arshad (Selangor, Malaysia) . . . 265
Effects of formaldehyde, sodium chloride, potassium permanganate and hydrogen peroxide on hatch rate of African catfish *Clarias gariepinus* eggs
J. Rasowo, O.E. Okoth and C.C. Ngugi (Eldoret, Kenya) . . . 271
Evaluation of artificial light regimes and substrate types for aquaria propagation of the staghorn coral *Acropora solitaryensis*
T.A. Schlacher, J. Stark (Maroochydore DC, QLD, Australia) and A.B.P. Fischer (Mooloolaba, Australia) . . . 278
The impact of environmental variables on the feeding rhythms and daily feed intake of cage-held 1+ Atlantic salmon parr (*Salmo salar* L.)
C. Noble, S. Kadri (Glasgow, Scotland, UK), D.F. Mitchell (Glasgow, Scotland, UK; Dover, Tasmania, Australia) and F.A. Huntingford (Glasgow, Scotland, UK) . . . 290
Minimization of precocious sexual phase change during culture of juvenile ornamental shrimps *Lysmata seticaudata* (Decapoda: Hippolytidae)
R. Calado and M.T. Dinis (Faro, Portugal) . . . 299
An integrated modelling approach for the management of clam farming in coastal lagoons
D. Marinov, L. Galbiati (Ispra (VA), Italy), G. Giordani, P. Viaroli (Parma, Italy), A. Norro (Brussels, Belgium), S. Bencivelli (Ferrara, Italy) and J.-M. Zaldívar (Ispra (VA), Italy) . . . 306
Live feed as supplement from the onset of external feeding of juvenile signal crayfish (*Pacifastacus leniusculus* Dana. Astacidae) under controlled conditions
M. Sáez-Royuela, J.M. Carral, J.D. Celada, J.R. Pérez and A. González (León, Spain) . . . 321
Feeding and management practices affect quality improvement in wild-caught edible crab (*Cancer pagurus*)
A. Kari Woll (Ålesund, Norway) and G. Marit Berge (Ås, Norway) . . . 328
Parental and stock effects on larval growth and survival to metamorphosis in winter flounder (*Pseudopleuronectes americanus*)
I.A.E. Butts and M.K. Litvak (Saint John, New Brunswick, Canada) . . . 339
The role of probiotic cell wall hydrophobicity in bioremediation of aquaculture
Y.-B. Wang and J.-Z. Han (Hangzhou, China) . . . 349

Nursery of the pink shrimp *Farfantepenaeus paulensis* in cages with artificial substrates: Biofilm composition and shrimp performance
E.L.C. Ballester, W. Wasielesky Jr., R.O. Cavalli and P.C. Abreu (Rio Grande (RS), Brazil) 355
Effects of white shrimp, *Litopenaeus vannamei* (Boone), and Nile tilapia, *Oreochromis niloticus* L., stocking density on growth, nutrient conversion rate and economic return in integrated closed recirculation system
B. Muangkeow, K. Ikejima, S. Powtongsook and Y. Yi (Pathumthani, Thailand) 363
Dimethylsulfoniopropionate (DMSP) accumulation in abalone *Haliotis midae* (Mollusca: Prosobranchia) after consumption of various diets, and consequences for aquaculture
A.J. Smit (Durban, South Africa), D.V. Robertson-Andersson, S. Peall and J.J. Bolton (Rondebosch, South Africa) 377
Effects of changes in salinity and temperature on survival and development of larvae and juveniles of the crucifix crab *Charybdis feriatus* (Crustacea:Decapoda:Portunidae)
J. Baylon (Iloilo, Philippines) and H. Suzuki (Kagoshima, Japan) 390
A comparison of the yield and yield economics of three types of semi-intensive grow out systems, in the production of *Heterobranchus longifilis* (Teleostei: Clariidae) (Val. 1840), in Southeast Nigeria
C.O. Ofor (Umuahia, Nigeria) 402

Nutrition

A comparison of online phytase pre-treatment of vegetable feed ingredients and phytase coating in diets for Atlantic salmon (*Salmo salar* L.) reared in cold water
V. Denstadli, T. Storebakken, B. Svihus and A. Skrede (Ås, Norway) 414
Survival, development and growth response of mud crab, *Scylla serrata*, megalopae fed semi-purified diets containing various fish oil:corn oil ratios
M.-H. Holme, P.C. Southgate and C. Zeng (Townsville, Queensland, Australia) 427
Growth response of the black tiger shrimp, *Penaeus monodon* fed diets containing different lupin cultivars
D.M. Smith, S.J. Tabrett (Cleveland, Queensland, Australia) and B.D. Glencross (North Beach, Western Australia, Australia) 436
Effects of fish oil substitution with a mix blend vegetable oil on nutrient digestibility in Murray cod, *Maccullochella peelii peelii*
D.S. Francis, G.M. Turchini, P.L. Jones (Warrnambool, Victoria, Australia) and S.S. De Silva (Bangkok, Thailand) 447
Apparent digestibility of selected marine and terrestrial feed ingredients for tropical spiny lobster *Panulirus ornatus*
S.J. Irvin and K.C. Williams (Cleveland, Qld., Australia) 456
Growth, survival and fatty acid composition of *Macrobrachium rosenbergii* (de Man, 1879) post larvae fed HUFA-enriched *Moina micrura*
S.K. Das, V.K. Tiwari, G. Venkateshwarlu, A.K. Reddy, J. Parhi, P. Sharma and J.K. Chettri (Mumbai, India) 464
Digestibility and muscle retention of astaxanthin in Atlantic salmon, *Salmo salar*, fed diets with the red yeast *Phaffia rhodozyma* in comparison with synthetic formulated astaxanthin
B. Bjerkeng (Sunndalsøra, Norway), M. Peisker (AA Koog aan de Zaan, The Netherlands), K. von Schwartzenberg (Hamburg, Germany), T. Ytrestøyl and T. Åsgård (Sunndalsøra, Norway) 476
Variable feed allowance with constant protein input for the pacific white shrimp *Litopenaeus vannamei* reared under semi-intensive conditions in tanks and ponds
J.A. Venero, D.A. Davis and D.B. Rouse (Auburn, AL, USA) 490
Enrichment of *Artemia* nauplii in vitamin A, vitamin C and methionine using liposomes
Ó. Monroig, J.C. Navarro, F. Amat and F. Hontoria (Castellón, Spain) 504
Supplementation of taurine and methionine to all-plant protein diets for rainbow trout (*Oncorhynchus mykiss*)
T. Gibson Gaylord (Hagerman, ID, United States), F.T. Barrows, A.M. Teague (Kearneysville, WV, United States), K.A. Johansen (Hagerman, ID, United States), K.E. Overturf and B. Shepherd (Kearneysville, WV, United States) 514
Fluorine accumulation in Atlantic salmon (*Salmo salar*), Atlantic cod (*Gadus morhua*), rainbow trout (*Onchorhyncus mykiss*) and Atlantic halibut (*Hippoglossus hippoglossus*) fed diets with krill or amphipod meals and fish meal based diets with sodium fluoride (NaF) inclusion
M. Moren, M.K. Malde, (Bergen, Norway), R.E. Olsen (Matredal, Norway), G.I. Hemre, L. Dahl (Bergen, Norway), Ø. Karlsen (Storebø, Norway) and K. Julshamn (Bergen, Norway) 525
Effect of dietary iron concentrations on growth, hematological parameters, and lipid peroxidation of soft-shelled turtles, *Pelodiscus sinensis*
J.-H. Chu, S.-M. Chen and C.-H. Huang (Chiayi, Taiwan) 532

Short Communication

Growth indices of small northern bluefin tuna (*Thunnus thynnus*, L.) in growth-out rearing cages
V. Tičina (Split, Croatia), I. Katavić (Zagreb, Croatia) and L. Grubišić (Split, Croatia) 538

Contents of *Aquaculture*, Volume 269 544